ABSTRACT

A wafer property is controlled by a semiconductor processing tool using data collected

from an in situ sensor. Initially, data relating to the wafer property is collected by the in situ

sensor during a process executed according to wafer recipe parameters. Subsequently, the

5   process may be adjusted by modifying the recipe parameters according to comparisons between

the data collected by the in situ sensor relating to the wafer property and the results predicted by

a process model used to predict wafer outputs. A subsequent process utilizing the data collected

by the in situ sensor is then executed. In at least some embodiments of the present invention the

data may be used for run-to-run control on subsequent wafers processed by the tool.